



Analytical Laboratory

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13339 Hagers Ferry Road
Huntersville, NC 28078-7929
McGuire Nuclear Complex - MG03A2
Phone: 980-875-5245 Fax: 980-875-4349

Order Summary Report

Order Number: J13060391

Project Name:

Customer Name(s): josh Quinn, Zack Hall

Customer Address: 573 Duke Power Rd

Mail Code: Cliffsides Steam Station

Mooresboro, NC 28024

Lab Contact: Jason C Perkins

Phone: 980-875-5348

Report Authorized By:
(Signature)

Jason C Perkins

Date:

7/2/2013

Program Comments:

Please contact the Program Manager (Jason C Perkins) with any questions regarding this report.

Data Flags & Calculations:

Any analytical tests or individual analytes within a test flagged with a Qualifier indicate a deviation from the method quality system or quality control requirement. The qualifier description is found at the end of the Certificate of Analysis (sample results) under the qualifiers heading. All results are reported on a dry weight basis unless otherwise noted. Subcontracted data included on the Duke Certificate of Analysis is to be used as information only. Certified vendor results can be found in the subcontracted lab final report. Duke Energy Analytical Laboratory subcontracts analyses to other vendor laboratories that have been qualified by Duke Energy to perform these analyses except where noted.

Data Package:

This data package includes analytical results that are applicable only to the samples described in this narrative. An estimation of the uncertainty of measurement for the results in the report is available upon request. This report shall not be reproduced, except in full, without the written consent of the Analytical Laboratory. Please contact the Analytical laboratory with any questions. The order of individual sections within this report is as follows:

Job Summary Report, Sample Identification, Technical Validation of Data Package, Analytical Laboratory Certificate of Analysis, Analytical Laboratory QC Reports, Sub-contracted Laboratory Results, Customer Specific Data Sheets, Reports & Documentation, Customer Database Entries, Test Case Narratives, Chain of Custody (COC)

Certification:

The Analytical Laboratory holds the following State Certifications : North Carolina (DENR) Certificate #248, South Carolina (DHEC) Laboratory ID # 99005. Contact the Analytical Laboratory for definitive information about the certification status of specific methods.

Sample ID's & Descriptions:

Sample ID	Plant/Station	Collection Date and Time	Collected By	Sample Description
2013014682	CLIFFSIDE	21-Jun-13 9:15 AM	GLENN LONG	BOTTOM ASH SLUICE 0.3m
2013014683	CLIFFSIDE	21-Jun-13 8:14 AM	GLENN LONG	FLYASH SLUICE 0.3m
2013014684	CLIFFSIDE	21-Jun-13 10:55 AM	GLENN LONG	SOURCE WATER (INTAKE 0.3m
2013014685	CLIFFSIDE	21-Jun-13 10:50 AM	GLENN LONG	ASH BASIN 0.3m
4 Total Samples				

Technical Validation Review

Checklist:

COC and .pdf report are in agreement with sample totals and analyses (compliance programs and procedures).

☒ Yes☐ No

All Results are less than the laboratory reporting limits.

☒ Yes☐ No

All laboratory QA/QC requirements are acceptable.

☒ Yes☐ No

Report Sections Included:

☒ Job Summary Report☒ Sample Identification☒ Technical Validation of Data Package☒ Analytical Laboratory Certificate of Analysis☐ Analytical Laboratory QC Report☒ Sub-contracted Laboratory Results☐ Customer Specific Data Sheets, Reports, & Documentation☐ Customer Database Entries☒ Chain of Custody☒ Electronic Data Deliverable (EDD) Sent Separately

Reviewed By: DBA Account

Date: 7/2/2013

Certificate of Laboratory Analysis

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This report shall not be reproduced, except in full.

Order # J13060391

Site: BOTTOM ASH SLUICE 0.3m

Collection Date: 21-Jun-13 9:15 AM

Sample #: 2013014682

Matrix: OTHER

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
<u>SULFIDE - (Analysis Performed by Element One)</u>								
Vendor Parameter	Complete					Vendor Method		V_ELE1

Site: FLYASH SLUICE 0.3m

Collection Date: 21-Jun-13 8:14 AM

Sample #: 2013014683

Matrix: OTHER

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
<u>SULFIDE - (Analysis Performed by Element One)</u>								
Vendor Parameter	Complete					Vendor Method		V_ELE1

Site: SOURCE WATER (INTAKE 0.3m

Collection Date: 21-Jun-13 10:55 AM

Sample #: 2013014684

Matrix: OTHER

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
<u>SULFIDE - (Analysis Performed by Element One)</u>								
Vendor Parameter	Complete					Vendor Method		V_ELE1

Site: ASH BASIN 0.3m

Collection Date: 21-Jun-13 10:50 AM

Sample #: 2013014685

Matrix: OTHER

Analyte	Result	Units	Qualifiers	RDL	DF	Method	Analysis Date/Time	Analyst
<u>SULFIDE - (Analysis Performed by Element One)</u>								
Vendor Parameter	Complete					Vendor Method		V_ELE1



Element One Inc.
6319-D Carolina Beach Rd.
Wilmington, NC 28412

Phone: 910 793-0128
Fax: 910 792-6853
e1lab@e1lab.com

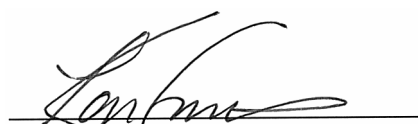
elementOne


REPORT OF ANALYSES

Duke Energy
Laboratory Services
13339 Hagers Ferry Road Bld. MG03A
Huntersville, NC 28078

June 28, 2013
Client Project Name CSS Bottom/Fly Ash Sluice
Client Project Number J13060391
PO Number

Sample Matrix	Other	Sample Type	Grab				Date Received	06/26/13
Date Analyzed	06/27/13						Time Received	1021
Delivered by	FedEx	Method	SM 4500 S ²⁻ D				Received by	LLB
eOne ID	Duke Energy ID	Parameter	Result	Unit	Dil	DL	Date Sampled	Time Sampled
20691-1	Bottom Ash Sluice 0.3m	Sulfide	< 0.05	mg/L	1	0.05	06/21/13	0915
20691-2	Fly Ash Sluice 0.3m	Sulfide	< 0.05	mg/L	1	0.05	06/21/13	0814
20691-3	Source Water (intake) 0.3m	Sulfide	< 0.05	mg/L	1	0.05	06/21/13	1055
20691-4	Ash Basin 0.3m	Sulfide	< 0.05	mg/L	1	0.05	06/21/13	1050


Ken Smith, Laboratory Director

20691 Duke Report Packet Compiled by 
NC Certifications: DW 37788 and DWQ DENR 604

Order # J3040391		Matrix other		Analytical Laboratory Use Only	
Logged By RLF		Date & Time 4/24/13 13:11		Samples Originating From	
				NC _____ SC _____	
				SAMPLE PROGRAM	
				NPDES _____	
				UST _____	
				Ground Water _____	
				Drinking Water _____	
				RCRA Waste _____	
		Cooler Temp (C) 2.0			
				↓ Filtered ↓	
				↓	
				NaOH _____	
				Zn _____	
				acetate _____	
				Preservative	
Element One		Filtration (0.46 um)			
PO#145772					

Duke Energy Analytical Laboratory in of Custody & Sample Log		Duke Energy Analytical Laboratory Mail Code MGOA2 (Building 740S) 13339 Hagers Ferry Rd Humesville, N. C. 28078 (704) 875-4246 Fax: (704) 875-5939	
Client Name	CSS Bottom/ Fly Ash Sluice	Phone No:	980-875-5963
Ident	Josh Quinn/ Zack Hall	Fax No:	980-875-4349
Business Unit:	20035	Process:	FOPR
Set ID:		Activity ID:	CS00
		Mail Code:	MGOA3
Study:	CSS Bottom/ Fly Ash Sluice	Station:	Cliffs(de

[illegible]

Customer to sign & date below		Accepted By: <u>[Signature]</u>		Date/Time	Date/Time	Requested Turnaround	Total <u>4</u>
<u>[Signature]</u>		Date/Time	Accepted By: <u>[Signature]</u>	6/21/13	1340		
Relinquished By		Date/Time	Accepted By:	Date/Time	Date/Time	* 14 Days	
<u>[Signature]</u>		6/21/13	1340				
Relinquished By		Date/Time	Accepted By:	Date/Time	Date/Time	7 Days _____ X _____	
<u>[Signature]</u>		6/25/13 1300	<u>[Signature]</u>	6.26.13	1021	* 48 Hr _____	
Seal/Locked By		Date/Time	Seal/Locked Opened By	Date/Time	Date/Time	* Other _____	
<u>[Signature]</u>		6/25/13 1300	<u>[Signature]</u>			17-2-13	
Comments		Total Sulfide by: SM 4500-S2-D				* Add Cost Will Apply	

2.72

Report DUE 07.02.13Analysis Due Date 07.01.13
QA/QC/Report Due Date 07.01.13

Client:	Duke Energy
LIMS No	J13060391
Project ID	CSS Bottom / Fly Ash Sluice

Date Rec:	06.26.13
Time Rec:	1021
Rec By	LLB

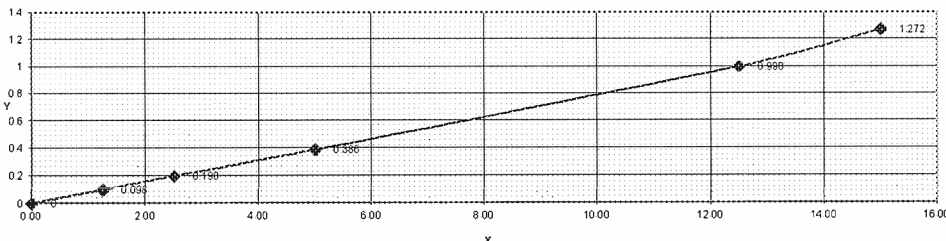
Ref. Method:
SM4500 S2 D**Sample Identification**

1	Bottom Ash Sluice		0.3m
2	Fly Ash Sluice		
3	Source Water (Intake)		
4	Ash Basin		

Analyses Requested	Samples 1-4	Sulfide
	NOTE:	Duplicate and Spike per method requirements

The MS/MSD spike should approximate 2 to 3 times the sample concentration. If no sulfide detected at 100 µg/L spike the sample to render the final spike concentration at ~ 500 µg/L

Lab CommunicationsSS Page 1 of 1
SS by LLB
6/26/2013 12:08:44 PMPrep By / Date AOS 6.27.13
Labeled By / Date LLB 6.26.13
ID Verification By / Date AOS 6.27.13

METHOD :		SM 4500 S2- D			ELEMENT ONE			
ELEMENT ASSAY :		Sulfide			Spectrophotometer		UNITS OF ANSWER	
					Wave Length		DETECTION LIMIT (ug)	
CLIENT:		Duke					SPK LEVEL (ug)	
Lab ID#		20691			664		MAX ALIQUOT	
Date:		6-27-13					STANDARD conc(ug)	
Time Analysis Begun		14:00						
Time Analysis Ended		14:30						
Analyst:		ADJ					STD ABSORPTION	
X		Y						
ug STD SOLUTION		STD ABS						
0.00		0						
1.25		0.098						
2.50		0.198						
5.00		0.386						
12.50		0.998						
15.00		1.272						
								
					Slope	0.083394306	Correlation	0.999010679
SAMPLE I.D.	SAMP ABS	ug PER ALIQUOT	mL ALIQUOT	F.VOL. X DILUTION	WEIGHT in g.	RESULTS ug/mL	% RPD % SPK REC	SPIKE LEVEL
LRB	0	0.00	25	1	1	<		
LRB SPK 1	0.398	4.93	25	1	1	0.197	99%	5.0
LRB SPK 2	1.04	12.5	25	1	1	0.502	100%	12.5
QC	0.391	4.84	25	1	1	0.194	97%	5.0
20691-1	0.003	0.24	25	1	1	<		
20691-1 dup	0.003	0.24	25	1	1	<	N/A	
20691-2	0.013	0.35	25	1	1	<		
20691-2 spk	0.394	4.88	25	1	1	0.195	98%	5.0
20691-2 spk	1.110	13.37	25	1	1	0.535	107%	12.5
20691-3	0.006	0.28	25	1	1	<		
20691-4	0.003	0.24	25	1	1	<		
BLK	0	0.000	25	1	1	<		
QC	0.391	4.843	25	1	1	0.194	97%	5.0
As per clients request: no sulfide is present in sample a 500ppm/12.5ug spike concentration was rendered.								

COC REV DATE 6/19/2013

Customer to complete appropriate columns to right

Customer to sign & date below				Customer, important: please indicate desired turnaround	Requested Turnaround	Total		
Relinquished By <i>[Signature]</i>	Date/Time 6/21/13 1340	Accepted By: <i>[Signature]</i>	Date/Time 6/21/13 1340					
Relinquished By	Date/Time	Accepted By:	Date/Time				*14 Days	
Relinquished By <i>[Signature]</i>	Date/Time 6/25/13 1300	Accepted By:	Date/Time				7 Days <u> X </u>	
Seal/Locked By <i>[Signature]</i>	Date/Time 6/25/13 1300	Sealed/Lock Opened By	Date/Time				* 48 Hr <u> </u>	
Comments Total Sulfide by: SM 4500-S2-D					*Other <u> </u> * Add. Cost Will Apply			